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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,705	02/24/2005	Rainer Mathes	Q86114	5900

23373 7590 09/29/2006

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EXAMINER	
GARCIA, ERNESTO	

ART UNIT	PAPER NUMBER
3679	

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/525,705	MATHES ET AL.	
	Examiner	Art Unit	
	Ernesto Garcia	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 February 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/24/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the elastomer damper material inserted in the space between the shank and the through hole (claim 9) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has been used to designate both a wall of the prior art (Figures 1-3) and the applicants' wall (Fig. 4). Note that one has one type of tapped hole than the other and thus not the same flange.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has been used to designate both a flange of the prior art (Figures 1-3) and the applicants' flange (Fig. 4). Note that one has one type of tapped hole than the other and thus not the same flange.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "15" has been used to designate both a tapped hole with a first configuration (Figures 1-3) and a tapped hole with a different configuration (Figure 4).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "16" has been used to designate both a through hole with a first configuration (Figures 1-3) and a through hole with a second configuration (Figure 4).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "17" has been used to designate both an screw having a first configuration (the prior art) and another screw having a second configuration (applicants' invention).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "18" has been used to designate both an head having a first configuration (Figures 1-3) and another head having a second configuration (Figure 4).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "19" has been used to designate both a shank with a first configuration (Figures 1-3) and another shank with a second configuration (Figure 4).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "19" and "19a" have both been used to designate the same shank in Figure 4.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "16b" and "116b" have both been used to designate the same segment in Figure 4.

The drawings are objected to because the cross hatching in Figures 1-3 is not properly shown. The arrows 7 and 9 representing gas are not a proper showing since arrows are used to represent direction or force. Either the arrows should be rectangles for conventional gas or the actual gas needs to be shown. The lead line of reference character "I" is missing. The arrow showing the screw 17 needs to be away from the head of the screw in Figure 2. Note that Figure 3 shows the arrow in "17" correct. Also the lead lines of reference character "16" in Figure 2 should be pointing to the hole and not the shank of the screw. The same applies to the tapped hole in Figure 3. Reference character "6" in Figure 4 should be pointing to the aperture without the arrow. Note that lead lines with arrows are used to show a part as a whole. The tapped hole

"15" does not appear to be threaded in Figures 1-3 to render being tapped, and the lead line of reference character 15 in Figure 4 points to the thread instead of the hole. Further, the lead line in reference character 16b should be shown without the arrow to show a segment of the through hole 16 and not the hole as a whole. The lead line of reference character 22 ends at the outside face of the flange and should show the washer instead.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure. The language should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes", "The fastener system of the invention", etc.

Claim Objections

Claims 1-3 and 10 are objected to because of the following informalities:

regarding claim 1, "the" in line 2 should be --a--, "the suction orifice" in line 2 should be --a suction orifice-- since a suction orifice has not been previously recited, "it" in line 11 needs to be defined, "the connection zone" in line 12 should be --a connection zone" since a connection zone has not been previously recited, "associated" in lines 6 and 14 should be deleted, "circularly" in lines 9 and 10 is an inherent property of cylindrical and thus unnecessary;

regarding claim 2, "it" in line 3 needs to be defined and "associated" in line 5 needs to be deleted;

regarding claim 3, "circularly" in line 2 should be deleted based on the reason given in claim 1, above;

regarding claim 9, "type" in line 2 needs to be deleted since the type is not known, "corresponding" in line 3 should be deleted, and "hole" in line 3 should be --holes--; and,

regarding claim 10, --the-- needs to be inserted before "through". Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, there is an inconsistency between the language in the preamble and a certain portion in the body of the claim, thereby making the scope of the claims unclear. The preamble clearly indicated that the fastener system is "for fastening a vacuum pump (1) to a wall (2) of a stationary structure (3), in which a coaxial annular flange (14) is provided on the vacuum pump body (4) around the suction orifice (6), tapped holes (15) are provided in the wall (2) of the stationary structure (3), through holes (16) are provided in the coaxial annular flange (14), and screws (17) having heads

(18) are fitted so that their shanks (19) pass through the through holes (16) and are screwed into the associated tapped holes (15)". However, the body of the claim positively recites "each through hole" in the flange of the vacuum pump, e.g., "the system being characterized in that each through hole comprises" (line 8), which indicates that the claims are being drawn to a combination of the "through holes" and both "the coaxial annular flange" and "the vacuum pump". Accordingly, is the combination or subcombination being claimed? Appropriate correction, clarification, or both is required. For purposes of this Office action, the examiner has considered the subcombination.

It is also unclear what else the fastener system is comprised other than the through holes. Further, the location of the enlarge proximal segment in the recitation "that is adjacent to the wall of the stationary structure" in lines 10 and 11 cannot be made in reference to components that are not claimed, i.e., the wall of the stationary structure.

Regarding claim 2, it is unclear what shape is required to allow the proximal segment during "bending of the screw shank until it comes into abutment against the side wall of the proximal segment" other than being cylindrical as recited in claim 1, lines 9-10. Further, the recitation "that is possible" in line 4 makes the lateral offset being not concrete and concise. Note that a claim cannot be drafted with the notion of

possibilities since one skilled in the art does not know how to determine what is or what is not possible.

Regarding claim 5, the metes and bounds of the claim is unclear. Since claim 1 has not established that the fastener system comprises the screw, the claim sets to define the system by modifying the screw, which is not claimed. For purposes of examining this claim, the examiner has considered the screw being part of the fastening system.

Regarding claim 8, the metes and bounds of the claim is unclear. Since claim 1 has not established that the fastener system comprises the screw and the flange, the claim sets to define the system by modifying the location of the washer in relation to the head of the screw and the outside face of the flange, which are not claimed. For purposes of examining this claim, the examiner has considered the screw and the flange being part of the fastening system. In other words, the location of the washer cannot be made in reference to components that are not claimed, i.e., the screw and the flange.

Regarding claim 9, the metes and bounds of the claim is unclear. Since claim 1 has not established that the fastener system comprises the screw and the flange, the claim sets to define the system by modifying the location of the elastomer damper material in relation to the shank of the screw, which is not claimed. For purposes of

examining this claim, the examiner has considered the screw and the flange being part of the fastening system. In other words, the location of the elastomer cannot be made in reference to components that are not claimed, i.e., the screw and the flange.

Regarding claim 10, the metes and bounds of the claim is unclear. Since claim 1 is unclear, claim 10 inherently become unclear. Further, what is the vacuum pump comprised of? Is "a fastener flange" in line 1 different than the "coaxial annular flange in claim 1, line 2?

Regarding claims 2-4, 6, and 7, the claims depend from claim 1 and therefore are indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5-8, and 10, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Nguyen et al., 6,176,663.

Regarding claim 1, Nguyen et al. disclose, in Figure 3, a fastener system comprising through holes **112** each comprising a distal segment (the bottom section of the counterbore **128**; Fig. 2) being cylindrical followed by an enlarged proximal segment **128** being cylindrical about an axis.

Regarding claim 2, the proximal segment **128** of the through holes **112** is of a shape. The proximal segment **128** is of a length greater than the length of the distal segment.

Regarding claim 5, the fastener comprises a screw 144 having a screw shank and a head. The shank comprises, adjacent to the head, a smooth shank segment of diameter considerably smaller than the diameter of the distal segment and followed to a free end by a threaded segment.

Regarding claim 6, the diameter of the smooth shank segment is less than or equal to 80% of the diameter of the distal segment.

Regarding claim 7, the proximal segment **128** is of a length greater than or equal to **1.5** times the length of the distal segment.

Regarding claim 8, the system further comprises a flange **102**, a washer **130** and a screw **144** having a head. The washer **130** is interposed between the head and an adjacent outside face of the flange **102**.

Regarding claim 10, Nguyen discloses a vacuum pump comprising a fastener flange **102** having the through holes **112** in accordance with the system rejected in claim 1.

Claims 1 and 9, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Allart et al., 5,220,854.

Regarding claim 1, Allart et al. disclose, in Figure 1, a fastener system comprising through holes each comprising a distal segment **7** being cylindrical followed by an enlarged proximal segment **14** being cylindrical about an axis.

Regarding claim 9, Allart et al. disclose, the fastener system further comprises a screw **9** having a shank and an elastomer damper material **12**. The elastomer damper material **12** is inserted in a space between the shank and the through hole.

Claims 1, 3, and 4, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Carlson, 2,560,413.

Regarding claim 1, Carlson discloses, in Figures 1 and 3, a fastener system comprising through holes **22** each comprising a distal segment **28** being cylindrical followed by an enlarged proximal segment **A1** (see marked-up attachment) being cylindrical about an axis.

Regarding claim 3, the proximal segment A**1** includes a cylindrical proximal portion **A2** connected to the distal segment **28** by a circularly frustoconical distal portion **A3**.

Regarding claim 4, the frustoconical portion **A3** has a cone half-angle equal to about 60 degrees.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson, 2,560,413.

Regarding claim 9,Carlson discloses the system further comprises a screw having a shank and a material inserted in a space between the shank and the through hole. However, the material is not an elastomer damper (as seen by the cross-section). However, Carlson suggests, in column 4, lines 10-16, any material possessing qualities of flowing and conforming to the bores can be used). Thus, one can use rubber, an elastomer damper material, since rubber possesses qualities of flowing and conforming to bores when being compressed. Therefore, as taught by Carlson, it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose rubber, an elastomer damper material, since rubber flows and conforms to bores when being compressed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-282-7083. The examiner can normally be reached from 9:30-5:30. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E.G.

September 23, 2006
Attachment: one marked-up page of Carlson, 2,560,413

Daniel P Stodola

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Carlson, 2,560,413

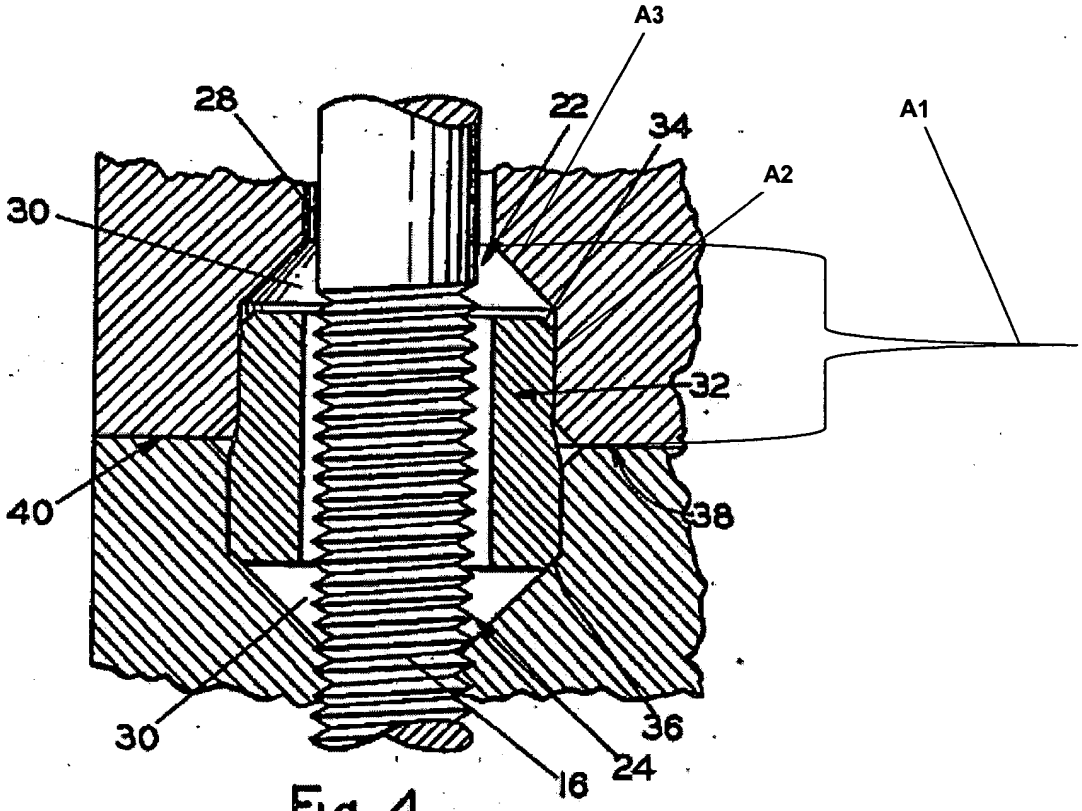


Fig. 4